reduce the temperature of the outgoing gases. The precedent of this design has been followed in other cases.

There is a considerable diversity of opinion in regard to the manner in which waste-heat boilers should be rated. In America boilers are usually rated at 10 sq ft (0.933 m^2) per horsepower, which is equivalent to an evaporation of 3 Ib (14.6 kg) per square meter of heating surface. Some have considered that this rating should be reduced to 7.30 kg for waste-service service, in spite of the fact that many boilers are in service at rates of evaporation considerably in excess of the above figures. When it comes to the selection of a boiler for any given waste-heat installation a consideration of some of the installations which have been made indicates wide differences in regard to the area of heating surface required.

WASTE HEAT BOILERS INSTALLED ON OPEN-HEARTH FURNACES
(Thomas B. Mackenzie, Iron, and Steel Institute, 1918)

	I	III	V	VII	IX
Nominal capacity of furnace,	30	45	100	60	60
Heating surface, * sq m	151.00	170.00	204.00	204.00	204.0
Economizer heating					
Steam pressure, absolute, per	7 14	8 35	5 20	6 18	8 64
Feed water, initial temp	11.6	6.95	40.8	9.5	29.3
Gas temperatures, deg. C.:	117 8	120.6	133 5	133 00	129
	504 00	585 00	422 00	577 00	439 00
Leaving boiler	254 00	273 00	232 00	303 00	304
Drop in boiler	250 00	212 00	190 00	274 00	135
Leaving economizer	169 00	182 00	184 00	172 00	264

Drop in economizer	84 00	91 00	48 00	131 00	40 00
Draft in mm of water : At boiler inlet		23 00	40 00	25 00	25 00
At boiler outlet		62 00	78 00	63 00	95 00
Drop through boiler		39 00	38 00	38 00	70 00
At draft fan	20 00	87 00	80 00	76 00	146
Drop through economizer .					
Probable volume of gases passing through	9.74	25.00	2.00	13.00	51.00

* Boilers all Babcock & Wilcox type.